

Listing of Claims

This listing of claims replaces all prior versions of claims in the application.

1-4. (canceled).

5. (currently amended): An electrophoretic apparatus comprising:

an electrophoretic member in which a ~~disk-shaped~~ plate-shaped member thereof has one or a plurality of passages formed therein and also such holes reaching the passage that are formed at positions corresponding to both ends of the passage on one surface of the ~~disk-shaped~~ plate-shaped member,

a voltage applying part for applying a voltage across the passage of the electrophoretic member,

a detecting part for detecting a specimen present in the passage of the electrophoretic member; and

a specimen-injection monitor mechanism for detecting a specimen at a site where a specimen is injected into the passage, the specimen-injection monitor mechanism being installed separately from the detecting part,

wherein the detecting part consists of a fluorescent-light detecting device for detecting a fluorescent light in a detection range, the fluorescent-light detecting device comprising:

a first optical system for focusing, for image formation, a light from the detecting range into a slit hole; and

a second optical system provided with a reflection-type diffraction grating, for separating a light from the slit hole and focusing the light, for image formation, onto a detecting element,

wherein the specimen-injection monitor mechanism and the detecting mechanism are each provided with a fluorescent-light detecting optical system, which shares a common excitation light source in use.

6. (canceled).

7. (original): The electrophoretic apparatus according to claim 5, wherein the specimen-injection monitor mechanism is provided with a detecting optical system having an LED as a light source thereof.

8. (currently amended): The electrophoretic apparatus according to claim 5, wherein:

the electrophoretic member comprising a specimen injection passage and a separation passage which intersect with each other; and

the apparatus further comprises a control part ~~for permitting~~ which (a) causes the voltage applying part to supply a voltage for guiding a specimen to an intersection between the specimen injection passage and the separation passage, and ~~for stopping the voltage upon the occurrence of~~ a (b) stops the voltage application to the passages upon the specimen-injection monitor mechanism detecting a non-uniform specimen distribution at in a predetermined range area along the specimen injection passage having been detected by the specimen-injection monitor mechanism, is not uniform after a predetermined time has elapsed.

9. (previously presented): The electrophoretic apparatus according to claim 5, wherein:

the electrophoretic member comprising a specimen injection passage and a separation passage which intersect with each other; and

the apparatus further comprises a control part which stops voltage application to said passages upon the specimen-injection monitor mechanism detecting a specimen present at said intersection as a result of the voltage applying part failing to electrophoretically migrate the specimen into the separation passage.

10. (currently amended): An electrophoretic apparatus comprising:

an electrophoretic member in which a ~~disk-shaped~~ plate-shaped member thereof has one or a plurality of passages formed therein and also such holes reaching the passage that are formed at positions corresponding to both ends of the passage on one surface of the ~~disk-shaped~~ plate-shaped member;

a voltage applying part for applying a voltage across the passage of the electrophoretic member;

a detecting part for detecting a specimen present in the passage of the electrophoretic member;

an electrophoretic-medium filling mechanism for filling an electrophoretic medium into the passages through reservoirs of the electrophoretic member and a specimen injection mechanism for injecting a specimen into one of the reservoirs,

an electrophoretic-medium sucking mechanism for removing an electrophoretic medium contained in the reservoirs;

a buffer-liquid injecting mechanism for injecting a buffer liquid into all the reservoirs of one electrophoretic member simultaneously after the electrophoretic medium is removed therefrom; and

a control part for controlling the electrophoretic apparatus including the mechanisms so that they all may operate automatically.

11. (canceled).

12. (original): The electrophoretic apparatus according to claim 10, further comprising a specimen sucking mechanism for removing a specimen left in the reservoirs after the specimen is injected into the passages, wherein

the control part controls the specimen sucking mechanism as well so that it may operate automatically.